

REMARKS

The Office Action of September 9, 2005 has been considered in detail, and Applicants here submit their comments to the Office Action below.

At the outset, the Examiner's attention is directed to the Substitute Specification (Clean and Marked-Up version) submitted concurrently herewith. As required by the Office Action, the specification has been amended to include section titles. In addition, the specification has been amended to cross-reference the application relied on for priority, and to correct errors of a clerical nature.

As required by the Office Action, Applicants submit herewith new sheets of drawings, including the requested corrections to Figures 1c, 2, 3, 5a, 5b and 6.

Claims 28 and 29 have been cancelled because the subject matter thereof is essentially redundant to that of claims 12 and 13. Some of the remaining claims have been amended for clarity. The somewhat ambiguous word "quantity" has been changed to "data rate". The words "data rate" refer to the rate at which data are transmitted, either as bits, or as continuous signals.

Claims 34-36 have been added to provide Applicants with the protection to which they are deemed entitled. The requirement of new claims 34-36 for plural audio components that are focus components is found on page 20, lines 8-12 of the specification as filed. New claims 34-36 indicate the independent claims, as previously and now submitted, do not preclude the use of plural focus components. In a claims having open coverage, the word "a" is broad enough to cover one or more than one; the independent claims of the present application have open coverage.

Claims 1-4, 6, 10-12, 22 and 26-33, as previously and as now written, are not rendered obvious by the combination of Slezak, U.S. Patent 6,647,119, Brandenburg et al., U.S. Patent 6,115,688 and the King et al. article entitled "The Impact of Signal Bandwidth on Auditory Location: Implications for the design of 3-dimensional audio displays."

None of the applied references discloses the requirement of claim 1 for a playing terminal to control the data rate of transmitted data (formerly referred to as "quantity of transmitted data"), relating to each of plural audio components, one of which is a focus component, wherein the focus component is based on a user selecting one of plural audible sounds or tracks that are emitted from an audio transducer arrangement, and wherein the data rate of the transmitted data is dependent on the selected focus sound or track. Independent claim 15 includes similar language. Claim 16 requires a processing arrangement of a playing terminal to send a control signal to an audio source, wherein the control signal indicates the data rate of data relating to each of plural audio components to be transmitted from the audio source to a playing terminal, wherein the data rate of data is dependent on the audio components selected as the focus component; the applied references do not disclose the foregoing feature of claim 16. Claim 18 distinguishes over the applied references by requiring transmitting a control signal to a remote audio source so as to control the data rate of transmitted data relating to each of plural audio components, at which the audio components are transmitted from an audio source, wherein the data rate of the transmitted data depend on a selected focus sound or track. Independent claim 32 distinguishes over the applied references by requiring a control signal to be transmitted to a remote audio source to control the data rate of transmitted data relating to each audio component at which audio components are transmitted from an audio source, wherein the data rate of transmitted data is dependent on a focus sound or track that is set. Claim 33 distinguishes over the applied references by requiring a user control means arranged to enable user-

selection of one of plural audio components as a focus component based on a user selecting one of plural audible sounds or tracks that are emitted from an audio production means, wherein the audio playing means is arranged to control the data rate of transmitted data relating to each of the audio components sent from an audio source means to an audio playing means, and wherein the data rate of transmitted data is dependent on the selected focused sound or track.

The Office Action admits the primary reference, Slezak, does not disclose two different bit rates for transmission of audio components, but relies on Brandenburg to disclose such a limitation. However, in Brandenburg et al, signals with low quality and low bit rate are initially transmitted to a decoder, before an additional coded signal having high quality bit rate is transmitted to the decoder. The low quality decoded signal must be generated in the decoder before the high quality signal can be decoded. The decoder drives a single bit stream in response to the low quality, low bit rate and high quality, high bit rate signals being applied to it. Hence, it is not seen how Brandenburg et al. is relevant to a system wherein a user selects one audio component as a focus component. It is not understood how one of ordinary skill in the art would understand, from Brandenburg et al., how to modify Slezak to include a playing terminal that controls data rate of transmitted data, relating to plural audio components sent from an audio source to a playing terminal, wherein the data rate of the transmitted data is dependent on a selected focus sound or track. Explanation is in order.

The reliance on the King et al. article is misplaced. The cited portion of King et al. the "DISCUSSION" on page 294, merely indicates that front/back acuity degrades in the vicinity of low pass and high pass filter cut-off frequencies. It is not understood how this discussion has anything to do with focus components and the data rate of transmitted data being dependent on a selected focus sound or track. The Examiner must provide an indication of the nexus between the King et al. disclosure and the claimed subject matter, as well as the disclosures of Slezak and

Brandenburg et al.

The Office Action also relies on Slezak et al., Figure 10, and the description thereof, in column 10, lines 1-15, to disclose a user controlling a focus element. However, Figure 10 of Slezak et al. is concerned with moving a simulated sound source from one location to another. In this regard, column 10, lines 1-3 states that the user selects a simulated sound source to adjust. Column 10, lines 9-14 indicate a pointer device enables an indicator 294 of a simulated sound source to be moved to a new position relative to the graphical representation 184 of the user. When the user has moved the indicator to its new position, the computer generates an audible indication of the new position of the simulated sound source in the space around the user. There is no indication in the discussion of Figure 10, that the moved simulated sound source is a focus component. It is also not clear that more than one simulated sound source is presented to the user in the Figure 10 system of Slezak.

The first full sentence on page 4 of the Office Action reads “It is inherent that a set of spatialized audio data can be created remotely from the playing terminal in place of creating it on the service side to reduce demands on the server.” It is not understood why a set of spatialized audio data is inherently created remotely from a playing terminal instead of creating it on a server. Explanation is in order.

The dependent claims are allowable for the same reasons advanced for the claims upon which they depend. In addition, many of the dependent claims define features not found in the three references applied against the independent claims. For example, claim 4 requires the bit rate of the audio components selected as a focus component to be a first predetermined bit rate, and the bit rate of another audio component to be a second predetermined bit rate. The Office Action alleges, in item 8, bridging pages 4 and 5, that the focus track and the other alleged tracks of Slezak are set at

predetermined bit rates. This statement ignores the requirement of claim 4 for the bit rates to be first and second bit rates.

Claims 6 and 22 require the audio source to stream the focus component at a predetermined bit rate, and to transmit each non-focus component as a non-continuous data burst of audio data relating to the sound or track, or a fraction of a sound or track. Item 9, page 5 of the Office Action, states that it is inherent that to save same bandwidth, the alleged non-focus elements of Slezak can be transmitted using just the online or low bit-rate data. It is not understood why it is inherent in the Slezak system to transmit a non-focus component as non-continuous data burst of audio data relating to a sound track, or a fraction of a sound or track. Explanation is required. Further, Applicants do not concede that Slezak et al. even discloses a focus component and a non-focus component. As previously discussed, Figure 10 of Slezak, relied on for the focus concept, is concerned with moving a simulated sound source, not selecting a focus component.

To reject the limitations of claims 14 and 30, which require each audio component to be representative of a link to a further sub-set of audio components stored at the audio source, wherein the playing device is operable to request transmission of the sub-set of audio components in the event that a link represented by an audio component is operated, the Office Action relies on the Slezak et al. disclosure, at column 6, line 67 – column 7, line 17. This portion of Slezak is concerned with enabling a user to participate in a conference. Four participants are displayed in real time in different quadrants of a display. Each quadrant is associated with a different acoustic transducer, located in proximity to the quadrant associated with the displayed quadrant participants. It is not seen how this embodiment of Slezak is concerned with the Figure 10 embodiment, relating to moving a simulated sound source from one position to another. It is also not understood how it is related to a system involving selecting a focus component. Explanation is in order.

Applicants traverse the rejection of claims 5 and 21 as being unpatentable over the combination of Slezak, Brandenburg et al, King et al., and further in view of the Billingham et al. article entitled “A wearable spatial conferencing space.” Claims 5 and 21 specifically require the audio component that is selected as the focus component to have a higher bit rate than the other audio components. The Billingham et al. reference obviously fails to cure the deficiencies of claims 1 and 18, upon which claims 5 and 21 respectively depend. In addition, the allegation in item 31, page 8 of the Office Action that page 80, column 2, first paragraph of Billingham et al. discloses audio culling that can be used to alleviate bandwidth restrictions is without foundation. There is no mention of bandwidth in this portion of Billingham, no less the requirement of claims 5 and 21 for the first and second predetermined bit rates to be set such as to enable higher quality reproduction of a focus component as compared with audio reproduction of the other audio components. The relied upon portion of Billingham et al merely states audio culling is used so that only the audio streams from the speakers closest to the listener of the broadcast are spatialized, to reduce CPU load. The Examiner must explain the allegation that Billingham teaches the use of audio culling to alleviate bandwidth restrictions, and how such allegation is applicable to a focus component having a higher bit rate than the other audio components.

Applicants traverse the rejection of claims 8, 9, 24 and 25 as being obvious as a result of Slezak, Brandenburg et al, and King et al., and further in view of the Kobayashi et al. article entitled “Dynamic Sound Scape: Mapping Time to Space for Audio Browsing.” Claims 8, 9, 24 and 25 are allowable for the same reasons advanced for claims 1 and 18, upon which they depend. Obviously, Kobayashi does not cure the foregoing deficiencies of claims 1 and 18, upon which claims 8, 9, 24 and 25 respectively depend. In addition, the combination of Kobayashi et al. with the references

relied upon to reject claims 1 and 18 is a result of hindsight. Kobayashi is concerned with selective listening by turning the head, such that the sound source to which the head is turned is the only sound source that is supplied to a user. Kobayashi has nothing to do with a position sensor that causes selection of an audio component that is a focus component, and which is used in combination with audio components that are other than the focus component. The Office Action gives no rationale as to why it would have been obvious for one of ordinary skill in the art to combine the teachings of Slezak, Brandenburg et al., King et al., and Kobayashi et al to provide a user interface in a system having a focus component and other components.

Applicants traverse the rejection of claims 7 and 23 as being obvious as a result of Slezak, Brandenburg et al., King et al. and the Goose et al. article entitled "A 3D Audio Only Interactive Web Browser: Using Spatialization to Convey Hypermedia Document Structure." Goose et al. does not cure the noted deficiencies of claims 6 and 22, upon which claims 7 and 23 depend. The Office Action alleges Goose et al. discloses a web browser using audio based links in a three-dimensional audio environment, wherein there is periodic replaying of a voice for announcement reasons. There is no mention in the Office Action of the specific location in the seven-page Goose et al. document to support these allegations. The undersigned attorney for Applicants has reviewed the Goose et al. reference, and fails to find any place to support the allegations in the Office Action. The Examiner must provide specific reference in the Goose et al. article for the position set forth in the Office Action regarding the reference. Further, Applicants are unable to understand how or why one of ordinary skill in the art would modify the Examiner's proposed combination of Slezak, Brandenburg et al., and King et al. to include the requirement of claims 7 and 23 for the playing terminal to receive an audio data burst relating to each non-focus component, and to store such a burst for subsequent replaying at the playing terminal, since Goose et al. has nothing to do with a

nothing to do with a system or method relating to focus and non-focus components.

In view of the foregoing amendments and remarks, favorable reconsideration and allowance are respectfully requested and deemed in order.

To the extent necessary, a petition for an extension of time under 37 C.F.R. 1.136 is hereby made. Please charge any shortage in fees due in connection with the filing of this paper, including extension of time fees, to Deposit Account 08-2025, and please credit any excess fees to such deposit account.

Respectfully submitted,

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Amendments to the Drawings:

Attached are Replacement Sheets for Figures 1c, 2, 3 5a, 5b and 6.